A New Reading of MARSHALL’s PRODUCERS’ Surplus: IMPLICATIONS FOR TRADE POLICY (A short note)

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Abstract: This paper presents a new interpretation of the Marshallian surpluses, namely welfare concepts which were proposed by Alfred Marshall in his seminal work Principles of Economics, published in 1890. Relying on surpluses and considering the so-called ‘small country case’, according to traditional views, it is recommended to remove tariffs imposed on the imports of commodities because it should increase welfare and, in theory at least, the losers of such a trade policy orientation can be compensated with the use of adequate transfers from the winners. Despite extensive use, the concept of surpluses still raises key-questions that may alter the case for free trade. Thus, referring to a new reading of Marshall's work, it appears that – from a semantic perspective – the workers should also be seen as producers, which is not the case in the traditional paradigm. Assuming that the workers are producers, at least their wage rents must be taken into account when discussing the impacts of trade liberalization; in addition, the welfare costs of unemployment caused by the opening of national economies should be included – as a result, the case for free trade weakens. Considering the US, more than 2 million jobs might have been lost since 2000 because of the growing openness of the economy; however, companies had time to prepare for the new conditions and policy-makers could have better assessed and addressed the social and economic consequences of globalization – including new memberships in the WTO.

1. Introduction

With the exception of US President Donald Trump, trade liberalization remains a high priority on the agenda of many leaders, especially in the EU.

The rationale for trade liberalization is based on a series of theoretical arguments, referring inter alia to David Ricardo’s comparative advantage and Alfred Marshall’s welfare concepts of surpluses. Such liberal perspectives are presented in standard undergraduate textbooks on international trade [7]. Other authors like Dani Rodrick [26] and Thomas Piketty [24] have questioned the benefits of trade liberalization, underlining among other things their consequences on the opening economies and social conditions.

In this short note, relying on my 2018 article, which proposed a new reading of Marshall’s seminal work on surpluses, I question the case for free trade [17]. The proposed approach differs from Rodrick and Piketti – above all, it relies on a semantic perspective, underlining the limitations and biases of the first interpretations of the producer’ surplus.

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In section 1, the traditional partial equilibrium case for free trade is presented, referring to the Marshallian triangles. In the following section (2), I expound extensively my reading of Marshall’s Principles; the workers are recognized as producers; their wages with corresponding surpluses/rents and their statuses on the labor market (employed, unemployed) are then added to the traditional welfare analytical framework, which leads to new conclusions about the impacts of trade liberalization – from the perspective of the importing countries, it would not support liberalization.

Referring to trade liberalization, evidence about wages and the cost of unemployment in the most advanced economies is provided in section 3. Reported facts confirm the need to adopt more ethical perspectives when discussing trade policies (section 4). The quest for optimum or scientific tariffs should perhaps be revived, assuming it does not lead to trade wars and other undesired
consequences, comparable to the 1930’s. In addition, there is room for industrial policies, within the framework of a renewed WTO (section 5).

2. Trade Liberalization and welfare: the ’micro-model’

2.1 Relevance of partial equilibrium analysis

Partial equilibrium (micro-)models can be used to justify free trade; they relate to market for single products and combine producers’ and consumers’ surpluses, as proposed by Alfred Marshall in his major book *Principles of Economics*, published in 1890. Relying on surpluses and identifying producers with firms, in the ‘small country case’ at least, it is recommended to remove tariffs barriers imposed on the imports of commodities because it should increase welfare and, in theory at least, the losers of such a trade policy orientation can be compensated with the use of transfers from the winners.

Thus, the partial equilibrium perspective considers only the effects of a given policy action – e.g. the removal of an import duty – in the market directly affected. It does not take into account the interactions between the various markets in a given economy. One of the advantages of such an approach is that it refers to the concept of rent or surplus, in monetary terms – which (in theory) can be measured, for both the producers and the consumers. In addition, this approach avoids an aggregation bias corresponding to situations where tariff removal would create inexistent welfare benefits because of not taking into account the conditions related to single products [1].

2.2. The case for free trade

Referring to figure 1, presenting the small country case, namely a price-taker on world markets, the removal of a tariff T imposed on an imported good lower its price on the domestic market from (Pw + T) to Pw. As a result of tariff removal, domestic production falls from Q2 to Q1 and consumption increases from Q3 to Q4. In terms of welfare, the so-called producers lose profits or area (1), because of the lower price and reduced sales. The state loses all its revenue measured by the area (3). Consumers or buyers gain [(1) + (2) + (3) + (4)]. In total, there is a net welfare gain for the small importing country equals to the sum of the traditional welfare triangles (2) and (4), with area (2) categorized as a production gain from the (presumed) better reallocation or redeployment of resources elsewhere in the domestic economy, while area (4) is the consumer gain caused by the expansion of the market, as a result of the lower price. Under ‘normal conditions’, [(2) + (4)] is always a positive value, which means that the outcome of the proposed standard analysis justifies the removal of the import duty or the full and unequivocal adoption of free trade, unilaterally or with the use of trade agreements.

2.3 Historical perspective

The standard or textbook economic and welfare analysis of trade liberalization is the outcome of specific interpretations of Marshall’s work. Thus, two Marshall’s successors initiated the analysis presented in this section: Henry Cunynghame, who studied with Marshall, is credited with applying the Marshallian curves to assess the impact of liberalization on a single market, for two open countries trading together and using import and export taxes [21]. In an article published in 1908, Enrico Barone – a prolific neoclassical and mathematical economist (seen as the father of scientific socialism), and military historian – derived the familiar welfare conclusions, without referring to the workers [11,19]. Marshall applied his analysis to trade policy, using consumer and producer surpluses; however, this work was not published at the time [29].
2.4 Passive versus active economic agents

Why were the workers excluded from the traditional welfare analysis? No one knows the right answer perhaps. A possible explanation could refer to the distinction between active and passive agents. Considering the market, the firms decide about production levels, the buyers decide about the quantities they want to consume, and the state imposes a tariff on imports. What about the workers? – They just work and have no decision power at all in the production process, they are the passive agents and, for that reason, they were just ignored.

3. The workers seen as producers and corresponding welfare implications

3.1 Workers are producers

Considering producers per se, in his *Principles of Economics*, Marshall mentions both ‘producers’ and the workers, who are seen as:(i) direct producers, with their wages, and (ii) indirect producers, or owners of capital.

"While national income or dividend is completely absorbed in remunerating the owner of each agent of production at its marginal rate, it yet generally yields him a surplus which has two distinct, though not independent sides. It yields to him, as consumer, a surplus consisting of the excess of the total utility to him of the commodity over the real value to him of what he paid for it… Another side of the surplus which a man derives from his surroundings is better seen when he is regarded as producer, whether by direct labor, or by the accumulated, that is acquired and saved, material resources in his possession.

As a worker, he derives a worker's surplus, through being remunerated for all his work at the same rate as for that last part, which he is only just willing to render for its reward; though much of the work may have given him positive pleasure.

As capitalist (or … as owner of accumulated wealth in any form) he derives a saver's surplus through being remunerated for all his saving…"


In other words, stricto sensu workers’ surpluses would first correspond to pleasure given by work and their remuneration. Overall, and despite some semantic ‘issues’ related to the complexity of Marshall’s analysis, when considering his work, wages should include a category of surplus reflecting the importance of workers as producers – what they are in fact.

3.2 The case for cautious trade liberalization

Wages are now added to profit when analyzing the welfare impacts of the removal of import duties. In other words, the wage element must be removed from the supply curve S and what remain are the industry marginal costs – or IMC in figure 1 – related to various inputs, not the factors of
production, which does not prevent suppliers from continuing their quest for a maximum profit along the supply curve S.

Again, the full elimination of the import duty affects firms’ profits, state revenues and consumers’ welfare – the sum of all impacts corresponds to the traditional welfare triangles, (2) and (4) in figure 1.

Referring to workers, the loss of wages corresponds to the difference between the supply curve and the industry marginal cost curve IMC related to the use of inputs. Thus, the wage change caused by the reduction of production from Q2 to Q1 corresponds to \( [(2) + (5)] \), a result which raises questions:

- What is the corresponding loss of welfare?
- Should ‘all-of-wages’ taken into account or just corresponding rents, referring to labor supply conditions on the labor market?

There is no straight answer to these questions.

Considering wage rents, a priori no one knows where the workers affected by liberalization come from, i.e. to what segments of the labor supply they can be associated with, and what are the corresponding rents. However, it can be assumed that these rents are positive values, which means that the workers’ rent-based loss of welfare represents a non-nil fraction of \( [(2)+(5)] \); more formally, the workers’ loss of welfare equals: \( \alpha[(2)+(5)] \), with \( 0<\alpha<1 \).

3.3 The ‘\( \alpha \)-indeterminacy’

When adding wage rents, the total welfare change caused by the elimination of an import duty is: \( [(2)+(4) - \alpha[(2)+(5)] \), which can be positive, nil or negative, depending on the actual value of \( \alpha \), an unknown parameter. If all ‘all-of-wages’ could be seen as rents (in which case \( \alpha=1 \) – an extreme and ‘absurd’ case, perhaps), the total welfare change would correspond to \( [(4)-(5)] \), with a corresponding cost for producers (firms plus workers) that is equal to the value-added change. In other words, the (lower) higher is \( \alpha \), the (higher) lower is the case for free trade.

3.4 Beyond wages and corresponding rents

Workers could also lose their jobs and stay unemployed for long periods of time, and for some of them, without unemployment benefits. Such desperate situations, which go far beyond ‘partial equilibrium comparative statics analysis’, imply that welfare losses could be much larger than wage rents, and for some workers they could correspond to ‘all-of-wages’, even more, etc.

To be conclusive, by adding wage rents and the (un)employment status of the workers to the welfare analysis of the impacts of trade liberalization, the case for free trade weakens, there could eventually be a relevant argument for protectionism.

4. Evidence about wages and unemployment

4.1 Wage dynamics in developed countries

After WWII, real wages in US manufacturing grew in line with productivity for about three decades, including the ‘golden sixties’. After the first oil shock in 1973, wages dynamic started being disconnected from productivity growth. Thus, according to Bivens and Mishel [5], net productivity grew by 1.33% percent each year between 1973 and 2014, which is significantly above the annual low 0.20% change for the median hourly compensation (see table 1 for more details).

Table 1: Median hourly compensation and productivity growth in the US, 1973–2014

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<tbody>
<tr>
<td>Median hourly wage</td>
<td>0.09</td>
<td>0.03</td>
<td>-0.30</td>
</tr>
<tr>
<td>Median hourly comp.</td>
<td>0.20</td>
<td>0.13</td>
<td>-0.30</td>
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<tr>
<td>Net productivity</td>
<td>1.33</td>
<td>1.41</td>
<td>0.91</td>
</tr>
<tr>
<td>Net productivity–median compensation gap</td>
<td>1.13</td>
<td>1.28</td>
<td>1.22</td>
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The large discrepancy between most wages and productivity corresponds to growing inequalities among workers and between social classes – with a large share of productivity gains going straight "in the pockets of extraordinarily highly paid managers and owners of capital" [5], which could reflect a dramatic shift of bargaining power between workers and their representatives, namely the trade unions, and the ruling elites, and institutional changes on labor markets.

A similar phenomenon is observed in Germany, the leading and largest economy in the EU. Despite higher education levels, German employees are confronted with stagnant or declining wages since the 1990s. As a result, the share of wages in national income reached a ‘historical low’ in 2007 and 2008, with 61% [6]. Furthermore, for the most recent years, favorable labor market conditions, with a comparatively low unemployment rate in the EU context, do not help improve workers earnings [9].

In Japan, for both men and women, real wages increased during the 1990s. During the 2000s, real wage started declining, especially for the ‘middle wage workers’[28]. UK displays similar features [4], etc.

4.2 The high costs of unemployment

Relying on Milton Friedman’s permanent income hypothesis and data provided by the German Socio-Economic Panel on the former territories of East Germany over the period 1992-2005, Knabe and Räetzel [15] conclude that the non-pecuniary costs of unemployment can amount to 2.3 times the loss of income.

Considering mental health per se, several studies underline the negative impact of unemployment on the psychological balance of the unemployed, especially in the 30 to 50 or 55 age range. Males are also seen as more vulnerable than females [13]. Unemployment may lead to schizophrenia and hospitalization.

The impact of unemployment on physical health is another field of investigation; there is an interface between mental health and the physical one – with unemployment, stress increases and poor diets prevail, contributing to heart diseases; moreover, being unemployed may delay the use of health cares because of pecuniary considerations and lead to risk-taking behaviors. The unemployed may also end up surviving and dying in the street [22].

The worst possible cost of unemployment, related to marginalization and extreme despair, is suicide. Quantitative studies show that, on average, one in five suicides is associated with unemployment [27].

4.3 The trade factor

The reported changes and tendencies can be attributed to several factors, including the opening of national economies, with the lowering of trade barriers, for both goods and services. After years of negotiation, China became also WTO member in 2001, which means it automatically benefits from the Most-Favorable-Nation (MFN) status in terms of market access and national treatment, contributing to more competition in the global economy and the subsequent decline of Western industries.

Considering the US, in the 1960s, manufacturing was first confronted with growing competition from Japan and European economies. For the more recent years, the rise of China as a major producer and key-exporter, and the threat of offshoring production are perceived as factors that explain the significant decline of manufacturing and the pressuring of wages in the US [16].

Nevertheless, it was clear that China will sooner or later become a WTO member and US companies had much time to adjust, assuming they adopted the right time horizon in their mindset. US policymakers had also sufficient time to assess the potential consequences of China’s WTO membership and foster specific measures to better address related social and economic risks – another ‘Benign Neglect’ in the US context.

Considering services, progress with computers, telecoms, and data gathering and processing, allows profitable offshoring investments and operations in low wages countries such as, for instance, India – where English is widely spoken. These features refer to e-commerce, which has also
considerable impacts on the level and the structure of economic activities and employment of most countries.

5. Moving welfare analysis beyond rents

5.1 Myopic policy-making

Considering issues like mental and physical health, homelessness, and life expectancy, including the voluntary termination of life – or suicide – because of despair, corresponds to paradigms developed, among others, by Sen, Rawls [25] and Nozick [23]. According to Sen, it is most surprising that welfare economics has been unable to integrate such dimensions that are very common for development economics:

"One of the extraordinary features of standard welfare economics has been the neglect of information about health, morbidity and longevity. Though these variables have often been taken seriously in the development literature ..., they have typically been ignored in welfare-economic treatises."


5.2 Ethical views

Sen proposes an approach based on capabilities to go beyond what he calls ‘welfarism’ – capabilities refer to the scope of the choice an individual has to function normally. They also relate to the possibility a person has to achieve his/her potential, his/her 'dreams’ perhaps. Unemployed Workers are definitely living far below their potentials et aspirations.

Rawls [25] focuses on the worst positions in the society, which should determine public choice – a ‘max-min perspective’. Such extreme positions relate first to the access to primary goods, defined as "things that every rational man is presumed to want" (Atkinson, 1998, page 8). In some cases, being jobless corresponds to the worst conditions.

Nozick’s perspective is different [23]. Amongst other things, he considers the way income distribution has been "brought about" [3] – to what extent it is legitimate. Such an approach may help clarify the evolution of income distribution in many countries over the last two or three decades; in that respect, the growing discrepancy between productivity and wages, with fast growing bonuses for the ‘principals’ (owners) and their ‘agents’ (managers), is worth analyzing – in addition to the growing pressures from trade.

In a book published in 2018, The Future of Capitalism, Collier [8] proposes new thoughts about the fabric of Western societies and world relations – in particular, he refers to: the growing divide between dynamic regions/cities and stagnant provinces, the extravagant wealth of highly educated elites versus the poor fate of unskilled workers, the growing gap between the richest countries and the poorest ones. Collier also observes the weakening of three key-pillars: the national state, community-driven companies and the family. The author proposes a series of practical measures to address the new challenges, including more controls on immigration and restoring a sense of national identity, curbing the predatory behavior of the skilled ones, and better redistributing the high rents of successful corporates. Above all, he refers to the importance of ethics, with reciprocity and dignity recognized as central values.

5.3 Creating positive values

It is useful to question the factors that can influence the making of moral judgments, which may help understand why human beings are ready to help others and show empathy when confronted with the harsh conditions and distress of unemployed workers and poor people. The work of neuropsychologist and philosopher Joshua Greene and others may provide some answers. Relying on standard experiments corresponding among other things to "ethical dilemmas, familiar to contemporary moral philosophers" [10], personal and direct contacts between people seem to matter a lot to explain critical decisions involving a moral judgment. In other words, the way politicians...
and policy-makers address unemployment and poverty could have a lot to do with the understanding and the direct experience they have of various social conditions. Moreover, the content of education matters a lot, in particular ethical beliefs which provide influential schemes about what is perceived as wrong or bad.

5.4 The quest for humanistic economics

These paradigms and findings suggest new approaches to evaluate and address the impacts of trade liberalization policies, moving beyond the traditional welfare triangles and wage losses. Social sciences should merge their views when studying the consequences of policy choice on the life of individuals and connections within societies. Such a vision requires an emphasis on altruistic thinking and values – for complementing and countering egoistic perspectives found in conventional economics textbooks.

6. Protectionism and the risk of trade wars

6.1 The adoption of optimum tariffs

The new reading of Marshall’s writings means that, in addition to other economic agents, the interest of the workers must be taken into account when deciding about the orientation of trade policies – including the search for the ‘best’ (optimum or scientific) tariffs to be imposed on the imports [12].

6.2 The risk of trade war

Nevertheless, in the real world, the quest for optimum or scientific tariffs by a given country may lead other countries (the trade partners) to react and adopt similar protectionist orientations. The outcomes of such actions and reactions – or retaliations – correspond to trade wars, which may lead to the collapse of trade and jeopardize national economies.

6.3 From trade war to violent conflict

Past developments – particularly the Great Depression, the 1930s and their inward-looking policies, and WWII – also show that trade and related policies matter for peace. Reversing liberal policies may have some theoretical ground; however, genuine and costly trade wars should be avoided and, considering the rise of tensions between major powers, the quest for more balanced relations should be favored – especially in the field of trade in goods and services, and FDIs.

6.4 Time path dependency of human decisions

Moreover, it should be noted that reversing liberalization tendencies is not exactly the opposite of liberalization. There could be high resilience and significant transitory costs. In that respect, Brexit illustrates the dangers and the risks associated with the reversal of past decisions. The use of embargoes has also to be reassessed carefully and the actual status of commercial treaties has to be reconsidered.

6.5 Rediscovering industrial policy

The avoidance of excessive tariffs and corresponding trade wars does not imply that countries are left without measures to improve their trade and economic performances. In such a perspective, it is worth noting that manufacturing industries are important for growth and development, and despite the disciplines of the WTO framework, there is room left for industrial policies in the context of liberalizing or open economies – what matters is not so much the label ‘industrial policy’, but the actual measures that can be adopted and contribute to industrial development [18].

6.6 A more pragmatic wto

According to the Havana Charter that was adopted in 1948, the International Trade Organization (ITO) should have been created to discipline trade policies. The creation of ITO was finally rejected
by the US. 70 years later, the US is questioning the role of the WTO, especially its dispute settlement mechanism - DSM.

There are deep thoughts about modifying the DSM – it would perhaps make sense to simplify the way panels are formed and function and completely abandon the Appellate Body. In fact, compromises should perhaps be favored with gentlemen agreements between the parties directly involved – this approach makes sense for the relationships between major players who can at any time withdraw from formal agreements. The role of lawyers has also been questioned, which may indicate the need for alternative dispute settlements, more balanced and better based on economic arguments and possibly statistical/causality analysis [14].

There should also be more flexibility regarding the tools of industrial policies and state interventions, especially when more action is required to address climate change and create new and better jobs.

6.7 Final remarks

Marshall’s traditional welfare triangles are widely used in academia and economic policy circles to justify the removal of import duties, and analyze other policy measures such as, for instance, the use and the elimination of production and export subsidies.

Referring to a new understanding of the Principles, the traditional or textbook interpretation of Marshall’s work is questionable. Thus, workers are not taken into account in the traditional welfare analysis, which refers only to firms, consumers and the state.

A candid reading of Marshall’s work helps identify workers as producers, with their own surplus and/or rents.

When adding workers and their surpluses to the traditional welfare analysis, the case for free trade may just vanish because the welfare impact of the removal of an import duty can be negative – an impossible outcome with the so-called traditional welfare triangles.

In addition, even if the wage-related rent is totally unknown, for most workers, it can be assumed that losing a job and being unemployed has serious welfare consequences. For instance, in the case of long-term unemployment and no unemployment benefit, the loss of welfare should perhaps be measured by at least the loss of income.

The last argument would imply that welfare analysis should move beyond rents and explicitly take into account, for instance, Sen’s capabilities related to incomes and wealth. According to Sen, such a move overtakes the so-called traditional ‘welfarism’.

The status of workers in the production process should be reconsidered by making them more active agents when deciding about the future of companies, especially when immediate high returns and the satisfaction of shareholders seem to prevail over long term profitability and production.

Considering the evidence, for the US, Germany and Japan at least, wages have – at most – remained flat for decades, a phenomenon that may have been partly induced by the further opening of their economies and the rise of China as a major trading nation, following its accession to the WTO.

The quest for the best commercial policies with, for instance, the adoption of optimal or scientific tariffs – assuming they can be calculated –, must take into account the risk of retaliation and the importance of the linkages between trade and peace.

Instead of promoting restrictive trade policies, industrial policies could be rehabilitated, combining various measures to adapt old industries and develop new ones.

The role and the status of the WTO has also to be reassessed.

Considering China, the country has been progressively integrating into the world economy since the 1970s. Its GDP continues to grow fast and could one day surpass the combined GDP of Western countries. The relative decline of the West will create more tensions – within such a context, it is most essential to defend a multipolar and balanced world, and multilateralism, with its formal and less formal rules.
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References


